UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,441	11/29/2003	Wade Lee	13.059	1202

9651 7590 06/20/2007

ELLIOT B. ARONSON
5001 HARBORD DRIVE
OAKLAND, CA 94618

EXAMINER	
WILLIAMS, DON J	
ART UNIT	PAPER NUMBER
2878	
MAIL DATE	DELIVERY MODE
06/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/724,441	LEE ET AL.
	Examiner	Art Unit
	Don Williams	2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 March 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17,18-20 and 21-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *18-20 and 27* is/are allowed.

6)☒ Claim(s) *1-17, 21-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 31, 2007 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-13 and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandell et al (5,649,761) in view of Erismann (5,818,337).

As to claims 1, 21 22, Sandell et al disclose a (flood light fixture) to define a motion activated lighting fixture including an aimable (PIR motion detector), the motion detector (PIR motion detector) including a housing (detector housing, 12) having a generally forward looking window (lens member, 18), the motion detector (PIR motion detector) being structured and arranged to define a first plurality of infrared detection zones (plurality of zones) directed through generally forward looking window (lens member, 18), detection zones (plurality of zones) forming a zonal pattern extending in

the generally forward direction and arranged for monitoring a far field (field of view) at a far level of vision, and the housing (detector housing, 12) being movable mounted on a base member (support base, 10) so as to permit the far field to be aimed at various positions closer and farther away wherein the improvement is characterized, (column 1, lines 5-10, fig. 1, column 2, lines 49-67). Sandell et al also disclose that the field of view will have a lateral spread in the range of 90 to 180 degrees or possibly more which is indicative of zonal patterns being capable of monitoring a field behind the motion detector, (column 2, lines 64-67). Sandell et al is silent of a housing having a generally downward looking window disposed at the underside of the housing and include an optical arrangement focusing infrared energy from a second plurality of detection zones through downward looking window, the plurality of detection zones forming a second zonal pattern for monitoring underneath the motion detector. Sandell et al and Erismann are related passive infrared motion detection devices. Erismann discloses a generally horizontal downward looking window (Fresnels, 26) disposed at the underside (lower side, 16) of the housing (12) and includes an optical arrangement (Fresnels lens, 26a, 26b, 26c) focusing infrared energy from a second plurality of detection zones (volume of space, 28) through downward looking window (Fresnel lens, 26), second plurality of detection zones (volume of space, 28) forming a second zonal pattern (volume or space, 28) for monitoring a field underneath the motion detector (10), (see figure 1, figure 2, column 2, lines 31-67, column 3, lines 1-25). It would have been obvious for one ordinary skill in the art to modify Sandell et al in view of Erismann to include a downward looking window capable of being directed at an angle to form a plurality of

detection zones in order to provide a wide field of view or far level of vision behind and underneath the motion detector to improve detecting capability and enhance the passive infrared sensor signal sensitivity allowing infrared emitting objects to be detected.

As to claim 2, Sandell et al disclose the first and second detection zones (plurality of zones) are arranged such that the field of view (motion detector's field of view) behind the motion detector housing (detector housing, 12) is monitored entirely by zones of second zonal patterns (plurality of zones), (fig. 1, lines 49-67).

As to claim 3, Erismann discloses a first plurality of detection zones (24a, 24b, 24c) form a further zonal pattern extending in the generally forward direction and arranged for monitoring intermediate fields not so distant as far field, (see figure 1, column 2, lines 31-41).

As to claim 4, Erismann discloses that the motion detector (10) comprises a dual element pyroelectric detector (20) structured and arranged to focus infrared energy from the first plurality of detection zones (24a, 24b, 24c) through the generally looking window (22a, 22b, 22c) onto the dual element pyroelectric detector (20) and to focus infrared energy from the second plurality of detection zones (28) through generally downward looking window (26) onto the dual element pyroelectric detector (20), (see figure 1, column 2, lines 31-62, figure 2, column 3, lines 1-13).

As to claim 5, Erismann discloses a dual element pyroelectric detector (20) and a downward looking segmented Fresnel lens (Fresnel lens, 26a, 26b, 26c) disposed to direct infrared energy onto a dual element sensor, (see figure 2, column 3, lines 6-9).

As to claim 6, Sandell et al disclose a Fresnel lens (lens member, 18), column 2, lines 58-60). Sandell et al is silent of a conical shape. Erismann discloses segmented Fresnel lens member (Fresnel lens, 26a, 26b, 26c) defines second zonal patterns (28), (see figure 2, column 3, lines 6-9). It would have been obvious for one ordinary skill in the art to modify Sandell et al in view of Erismann to include Fresnel lens and zonal patterns that form a conical shape, and that the conical shape normally constitutes the area being monitored by the motion detector resulting in monitored detection zones.

As to claim 7, Sandell et al disclose (motion detector housing, 12) is angled downward to monitor a downward direction (region) when the housing (motion detector housing, 12) is level and the segmented Fresnel lens (lens member, 18) is disposed, (fig 1, column 2, lines 58-67, fig. 2, column 3, lines61-67). Sandel et al is silent of a conical shape. Erismann discloses a dual element pyroelectric detector (20) and a downward looking Fresnel lens (26a, 26b, 26c) located horizontally on the lower surface (16) of the housing (12), (see figure 2, column 2, lines 41-49). It would have been obvious for one ordinary skill in the art to modify Sandell et al in view of Erismann to align a single sensor along a vertical or central axis in a downward direction to improve the detection zonal area or space defined by the zonal patterns resulting in a conical shape.

As to claim 8 Erismann discloses a dual element pyroelectric detector (20) capable of being angled toward opposite sides of the straight ahead directions to improve the detection of angulated detection zones, (see figure 2).

As to claim 9, Sandell et al disclose second zonal patterns (plurality of zones), column 2, lines 57-60). Sandell et al is silent of a conical shape. Erismann discloses segmented Fresnel lens member (Fresnel lens, 26a, 26b, 26c) defines second zonal patterns (28), (see figure 2, column 3, lines 6-9). It would have been obvious for one ordinary skill in the art to modify Sandell et al in view of Erismann to include Fresnel lens and zonal patterns that form a conical shape, and that the conical shape normally constitutes the area being monitored by the motion detector resulting in monitored detection zones.

As to claim 10, Sandell et al disclose second zonal patterns (plurality of zones), (column 2, lines 55-60). Sandell et al is silent of a curtain shape. Erismann discloses segmented Fresnel lens member (Fresnel lens, 26a, 26b, 26c) defines second zonal patterns (28), (see figure 2, column 3, lines 6-9). It would have been obvious for one ordinary skill in the art to modify Sandell et al in view of Erismann to include Fresnel lens and zonal patterns that form a curtain shape and that the curtain shape normally constitutes the area being monitored by the motion detector resulting in monitored detection zones.

As to claim 11, Sandell et al disclose motion detector (PIR infrared motion detector) includes one and only one sensor (a sensor) and the motion detector (PIR infrared motion detector) is structured and arranged to focus infrared energy (infrared radiation) from the first plurality of detection zones (plurality of zones) through generally forward looking window (lens member) onto the sensor (PIR motion detector) and from second plurality of detection zones (plurality of zones), through generally downward

looking window (lens member, 18) onto the sensor (PIR infrared motion detector) (column 1, lines 1-9, column 2, lines 58-67).

As to claim 12, Erismann discloses a motion detector (20) includes a segmented Fresnel lens member (Fresnel lens, 26a, 26b, 26c) disposed in generally downward looking window (Fresnels lens, 26) and formed to define second zonal pattern (28), (see figure 2, column 2, lines 31-49). Erismann fails to explicitly disclose a curtain pattern. It would have been obvious for one ordinary skill in the art to know that a curtain pattern formed by zonal areas is well known and that the curtain pattern normally constitutes the area being monitored by the motion detector.

As to claim 13, Sandell et al disclose some of the detection zones (plurality of zones) of second zonal pattern (plurality of detection zones) have a lateral spread in the range of 90 to 180 degrees or possible more constitutes second zonal patterns capable of extending in the backward direction when motion detector housing (motion detector housing, 12) is horizontal, (fig. 1, column 2, lines 58-67).

As to claim 23, Erismann discloses a dual element pyroelectric detector (20) mounted on the support structure (8) wherein the sensors are angled toward opposite sides as constituted by the perpendicular detection zones (24a, 24b, 24c) and (28), (see figure 1, column 1, lines 31-50).

As to claim 24, Erismann discloses second optical arrangement (26a, 26b, 26c) defines one or more focal lengths shorter than focal lengths of first optical arrangements (22a, 22b, 22c), (see figure 2, column 2, lines 31-50).

As to claim 25, Erismann discloses that the first optical arrangement comprises one or more first segmented Fresnel lens members (22a, 22b, 22c) disposed to focus infrared energy onto one or more sensors (20) and a second optical arrangement comprises a second segmented Fresnel lens member (26a, 26b, 26c) disposed to focus infrared energy onto downward looking sensor, (see figure 1, figure 2, column 2, lines 31-67, column 3, lines 1-7).

As to claim 26, Sandell et al disclose (lens member, 18), (fig. 1, column 2, lines 58-60). Sandell et al fail to explicitly disclose second segmented Fresnel lens discloses closer to downward looking sensor. Erismann discloses a second segmented Fresnel lens member (Fresnel lens, 26a, 26b, 26c), first segmented Fresnel lens member (Fresnel lens, 22a, 22b, 22c), shorter focal length normally corresponding to a downward looking sensor and a longer focal length normally corresponding to a forward looking sensor, both forming plurality of detection zones (28), and (24a, 24b, 24c), (see figure 1, figure 2, column 2, lines 31-67). It would have been obvious for one ordinary skill in the art to modify Sandell et al in view of Erismann to include second segmented Fresnel lens discloses closer to downward looking sensor in order to improve the focus of the detecting sensor and increase the detecting sensibility of the sensor allowing objects to be detected at various angulated positions.

Claims 14, 15, 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandell et al in view of Erismann (5,818,337) and further in view of Schwarz (5,393,978).

As to claim 14, Sandell et al disclose second zonal patterns (plurality of zones) is arranged such that detection zones (plurality of detection zones) of second zonal patterns (plurality of zones) have a lateral spread in the range of 90 to 180 degrees or possibly more constitutes second zonal patterns (plurality of zones) being capable of extending backward only when the (motion detector housing, 12) is aimed below horizontal, (column 1, lines 1-7, column 2, lines 58-67). Sandell et al in view of Erismann fail to explicitly disclose an angle greater than a characteristic angle. Schwarz discloses relative angle (α) with a horizontal rearward field of view. It would have been obvious for one ordinary skill in the art to modify Sandell et al in view of Erismann and further in view of Schwarz to include a relative angle (α) in order to provide a wide field of view behind the motion detector to increase the detection zonal area or space, (see figure 1a, column 3, lines 57-67.

As to claim 15, Sandell et al in view of Erismann fail to explicitly disclose a characteristics angle at 14°. Schwarz discloses angles (α, β). It would have been obvious for one ordinary skill in the art to modify Sandell et al in view of Erismann and further in view of Schwarz to include a wide rear horizontal field of view of the motion detector in order to improve and define a wide angle to allow the motion detector to detect emitting objects in an increased space or zonal area.

As to claim 16, Sandell et al disclose second plurality of detection zones (plurality of zones), (fig. 1, column 2, lines 58-67). Erismann discloses a second plurality of detection zones (28) under the motion detector (10). Sandell et al in view of Erismann fail to explicitly disclose zonal pattern for dense coverage behind the motion detector.

Schwarz discloses zonal patterns behind the motion detector. It would have been obvious for one ordinary skill in the art to modify Sandell et al in view of Erismann and further in view of Schawarz to include a rearward looking optical system capable of being directed at an angle to form a plurality of dense zonal patterns in order to provide a wide field of view behind the motion detector to improve detecting capability and enhance the passive infrared sensor signal sensitivity allowing infrared emitting objects to be detected.

As to claim 17, Sandell et al disclose a lateral spread in the range of 90 to 180 degrees or possibly more, (column 2, lines 65-67). Sandell et al in view of Erismann fail to explicitly disclose one level of vision per twelve degrees. Schwarz teaches a wide rear horizontal field of view of the motion detector (10). It would have been obvious for one ordinary skill in the art to modify Sandell et al in view of Erismann and further in view of Schwarz to include a wide rear horizontal field of view of the motion detector to improve and define a wide angle corresponding to angles (α, β) in order to allow the motion detector to detect emitting objects in an increased space or zonal area, (see fig. 1, column 3, lines 52-68, fig. 1a, column 4, lines 10-65).

Allowable Subject Matter

Claims 18-20, and 27 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to teach either singly or in combination a motion activated

lighting fixture having backward detection zone characterized by a dip angle φdip and azimuth θ determined when housing is level, and plurality of backward directed detection zones has no detection zones with a dip angle of less than φlimit, determined by relation tan φlimit = sin θ tan 50° regarding claim 18.

Response to Arguments

Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Don Williams whose telephone number is 571-272-8538. The examiner can normally be reached on 8:30a.m. to 5:30a.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Georgia Epps
Supervisory Patent Examiner
Technology Center 2800